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appearance. He had not been able to give them much attention during the day; but when they are transferred to the neighborhood of register or fire-place, and thus are made unusually comfortable, they at once begin their ablutions. Invariably, at night, when the gas-lamp is lit and placed near the glass formicaries, the heat and light, both of which appear to be grateful to them, tempt them out, as already stated, and they begin operations. So also after eating, and when awaking from sleep. In short, whenever they are in a particularly comfortable state they express their satisfaction by making their toilet.

Notes on Acer rubrum.—Mr. THOMAS MEEHAN observed that polygamous plants were defined as those which had hermaphrodite and male and female flowers on the same or separate plants, and, in some of our text-books, the red maple was given as an illustration. But though the red maple had full-sized anthers in the early stage of the female flowers, the stamens were never fully developed, or were polleniferous, so far as his experience extended. According to his observations, the casual observer might be pardoned for supposing what are really but female flowers are hermaphrodite; for, on the bursting of the petals, the centre of the flower seems a mass of perfectly formed anthers. At this particular stage of the inflorescence, the appearances in the male and female flowers are exactly alike, except that in the female flowers the apices of the two pistils are visible in the centre of the mass of stamens in the one case, while they are wholly absent in the other. But, with the expansion of the petals, all growth in the stamens ceases in the pistillate flowers. They remain in this unfinished condition, while the pistils continue to elongate and the ovaria to enlarge, eventually drying up and falling away. In the male flowers, however, the filaments lengthen to one-fourth, and occasionally in some trees to half an inch; and, when the proper time comes, the anther cells burst and the pollen escapes. Why the stamens should be advanced to this stage in the female flowers to be suppressed just before their full development does not appear. It is an interesting problem awaiting further investigation, but it leaves us with the fact that the flowers are none of them truly hermaphrodite. The red maple is really a diœcious plant.

Mr. Meehan then proceeded to examine the average proportion of the sexes among individual trees. On a tract on which were 144 trees, apparently ten to fifteen years old, he found 34 of them not yet in flowering condition; of the remaining 110, 41 were females and 69 males, showing about one-third more males than females. He had examined a large number of trees of mature age, but so far as he could ascertain there was no attempt to change the sexual characters, but each tree was male or female throughout its life. In all that has so far been said of the structure and behavior of the flowers, those of the silver maple, *Acer* *dasycarpum*, correspond, but in the permanency of the sexual character the silver maple departs here. It is not uncommon to find trees originally female, at some time sending forth male branches. So far as his observations have gone, no male tree ever produces female branches, nor does a branch once producing male flowers return to a female condition. Notes were made to ascertain whether the mere vegetative vigor or the early or lateness of flowering had anything to do with the sexual conditions; but though some trees were nearly a week later in opening their flower buds than others, and some trees were weak and starved looking, while others were vigorous, these varieties were as equally divided among those of one sex as the other.

It was further noted that the male flowers were fragrant, while the female flowers were inodorous, in this respect similar to the willow. The male flowers of the willow are eagerly sought for by bees which collect pollen from them. So far he had found no bees visiting these, though in the warm April days some of the last to be in blossom attract small sand wasps to them. It is probable that bees may under some circumstances visit the flowers, though under this season's observation they had not done so. As it appeared that in many cases bees and insects were attracted to flowers by their odor, and that the visits resulted in cross fertilization, it was worthy of inquiry by those engaged in this special study what purpose was served by this sweet attraction in cases like this of the maple and willow. Can it be that the red maple or its ancestors were once truly hermaphrodite, and that when the sexes were separated, and the species become anemophilous, fragrance remained as the hereditary remains of a past usefulness?

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